

## SYSTEM AND METHOD FOR PROVIDING MULTI-BEAM SCHEDULING

### ABSTRACT OF THE DISCLOSURE

5           Embodiments of the present invention relate to communication systems. Such  
communication systems may include a beamformer that is adapted to provide a  
plurality of beams, each of the plurality of beams providing communication for a  
corresponding coverage envelope, the plurality of coverage envelopes comprising at  
least one pair of overlapping coverage envelopes and at least one pair of non-  
10   overlapping coverage envelopes, and a scheduler that assigns system resources from a  
group of shared system resources to a plurality of receivers distributed throughout the  
coverage envelopes, the scheduler being adapted to assign the same system resources  
from the group of shared system resources for use during a simultaneous data  
transmission to a receiver in each of the coverage envelopes that comprises the at least  
15   one pair of non-overlapping coverage envelopes.